

REMARKS

Claims 1-20 are all the claims presently pending in this application. Claims 1-20 have been amended to more particularly define the claimed invention.

A Petition for Extension of Time and Fee for a one (1) month extension of time is included herewith to respond timely to the Non-Final Office Action mailed December 15, 2006.

It is noted that the amendments are made only to more particularly define the invention and not for distinguishing the invention over the prior art, for narrowing the scope of the claims, or for any reason related to a statutory requirement for patentability. It is further noted that, notwithstanding any claim amendments made herein, Applicant's intent is to encompass equivalents of all claim elements, even if amended herein or later during prosecution.

In a telephone interview with the Examiner of record on April 4, 2007, Applicant's representative confirmed that the rejection of claims 1-3 and 10-12 under 35 U.S.C. §103(a) on pages 2-3 of the Non-Final Office Action should have been a rejection under 35 U.S.C. §102(b). Therefore, Applicant will treat this rejection as being under 35 U.S.C. § 102(b) based on the Examiner's direction and recognition of this error.

Claims 1-3 and 10-12 stand rejected under 35 U.S.C. §102(b) as being anticipated by Hughes et al., U.S. Pat. No. 6,484,029.

Claims 4, 7, 13 and 16-17 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Halasz, U.S. Pat. No. 6,732,163, further in view of Motomura, EP 1,209,863.

Claim 5-6, 8-9, 14-15 and 18-20 stand rejected under 35 U.S.C. §103(a) as being

unpatentable over Halasz, U.S. Pat. No. 6,732,163 and Motomura, EP 1,209,863, further in view of Hughes et al., U.S. Pat. No. 6,484,029.

These rejections are respectfully traversed in view of the following discussion.

I. APPLICANT'S CLAIMED INVENTION

The claimed invention, as defined, for example, by independent claim 1, (and similarly independent claims 4, 7, 10, 13, 16-17 and 20) is directed to a wireless LAN system including an access point connected through a wire network and a mobile terminal performing a wireless communication with the access point, a selection circuit that selects a wireless frequency usable in a relevant area out of stored wireless frequency data on the basis of area information inputted into the mobile terminal at a time of setting a frequency that performs a wireless communication, and a communication circuit through which the access point and the mobile terminal perform a wireless communication with each other by the wireless frequency selected by the selection circuit.

Conventionally, frequency setting of wireless networks only determines frequencies fixed to an area in which an access point or a mobile terminal is used. The problem lies in that these frequencies cannot be used as they are kept intact in case an access point or a mobile terminal which has already completed setting frequencies in advance is installed in or moved to another area. (Application at page 4, lines 7-13).

The claimed invention (e.g., as recited in claims 1, 4, 7, 10, 13, 16-17 and 20), on the other hand, includes a selection circuit that selects a wireless frequency usable in a relevant area out of stored wireless frequency data on the basis of area information inputted into said mobile terminal at a time of setting a frequency that performs a wireless communication.

This feature of the invention is important to determine a frequency through a selecting operation on the part of the user which then provides frequency information obtained by automatically judging whether the frequencies conform to the specification of each area or whether they are free frequencies not in use. (Application at page 5, line 23 to page 6, line 1.)

II. THE ALLEGED PRIOR ART REJECTIONS

A. The 35 U.S.C. § 102(b) Rejection over Hughes et al., U.S. Pat. No. 6,484,029

The Examiner alleges that Hughes et al., U.S. Pat. No. 6,484,029, (Hughes), teaches the invention of claims 1-3 and 10-12.

Applicant submits, however, that Hughes does not teach or suggest, “*a selection circuit that selects a wireless frequency usable in a relevant area out of stored wireless frequency data on the basis of area information inputted into said mobile terminal.*”

The Examiner alleges that the user input of Hughes to confirm an identified location before the mobile unit reconfigures its settings, found at column 4, lines 3-14, is equivalent to Applicant’s area information inputted into said mobile terminal.

Applicant respectfully traverses the Examiner’s allegation since Hughes clearly teaches from the same passage that the user input is only used to confirm the identified location, not to select the available frequency on the basis of the user input confirmation.

Indeed, Hughes clearly teaches away from Applicant’s claimed invention by disclosing that the mobile unit determines through looking at the frequency table that the mobile terminal is currently located in a particular area.

In another embodiment of the present invention, the mobile unit may be configured so that the user must verify the country in which they are located.

For example, if the mobile unit determines through looking at the table that it is currently located in Switzerland, a message may appear on a display screen on the mobile unit saying "You are in Switzerland. Is this correct? (Y/N)". The user may then be required to confirm the identified location in Switzerland before the mobile unit reconfigures its settings to comply with Swiss standards. (Emphasis added.) (Column 4, lines 3-12.)

Hughes discloses the mobile unit determining the location on the basis of tuning to each available frequency from a table or equivalent data structure in memory until an announcement message is received (column 3, lines 15-23). In a separate embodiment, a user may confirm the mobile unit's predetermined frequencies before the mobile unit reconfigures its setting to comply with a local area's standards.

Applicant's claimed invention may include a *selection circuit that selects a wireless frequency...on the basis of area information inputted into the mobile terminal*. Hughes clearly teaches that the selection of the wireless frequency is based on the mobile units scanning of available frequencies until an announcement message from a nearby access point is received, not on the basis of area information inputted into the mobile terminal, (e.g., not based upon a user's input confirmation of a predetermined wireless frequency).

Therefore, Applicant respectfully requests the Examiner to reconsider and withdraw this rejection since the alleged prior art reference to Hughes fails to teach or suggest each element and feature of Applicant's claimed invention.

B. The 35 U.S.C. § 103(a) Rejection over Halasz, U.S. Pat. No. 6,732,163 further in view of Motomura, EP 1,209,863

The Examiner alleges that Halasz, U.S. Pat. No. 6,732,163, (Halasz), further in view of Motomura, EP 1,209,863, (Motomura), makes obvious the invention of claims 4, 7, 13 and 16-17.

The Examiner alleges that one of ordinary skill in the art would have been motivated to modify Halasz with the teaching from Motomura to form the invention of claims 4, 7, 13 and 16-17. Applicant submits, however that these references would not have been combined and even if combined, the combination would not teach or suggest each element of the claimed invention.

Indeed, Applicant submits, however, that neither Halasz, nor Motomura, nor any alleged combination thereof, teaches or suggests:

“a selection circuit that selects a wireless frequency...on the basis of area information inputted into said maintenance device,” of independent claims 4 and 13;

“a selection circuit that selects a wireless frequency...out of wireless frequency data stored in said maintenance device on the basis of area information inputted into said maintenance device,” of independent claim 7;

“a transmission circuit that performs reception operations...on the basis of area information inputted through said man-machine interface of said maintenance device,” of independent claim 16; and

“selecting a wireless frequency...on the basis of area information inputted at a time of setting a wireless frequency for the wireless LAN system to communicate, and making said mobile terminal and said access point perform wireless communication with each other,” of independent claim 17.

Applicant respectfully submits, as above, that Halasz would not have been combined with Motomura as alleged by the Examiner. Indeed, these references are non-analogous because they are completely unrelated. (Halasz is directed to a system for selecting the operating frequency of a wireless access point, in a wireless network.

Motomura is directed to an electronic apparatus with a short range (Bluetooth) wireless communication device to which a GPS receiver is connected that detects a current country in which the electronic apparatus is presently located and then selects usable frequency bands of the determined country for short range (Bluetooth) wireless communication, and problems completely different from those to which the present invention and/or Halasz are directed.) No person of ordinary skill in the art would have considered combining these disparate references, absent impermissible hindsight.

The Examiner alleges that one of ordinary skill in the art would have been motivated to combine Halasz and Motomura “to provide [an] improved access point for configuring the access point to communicate [with a] mobile terminal used in different countries.”

However, Applicant submits that the Examiner fails to provide proper motivation or suggestion in the references or of one of ordinary skill in the art to urge the combination as alleged by the Examiner. There is no teaching or suggestion in either Halasz or Motomura to combine Halasz’s disclosure of a wireless access point scanning available frequencies in a wireless network to communicate with a wireless mobile device, with Motomura’s disclosure of an electronic device that changes short range Bluetooth wireless communication frequencies based on a GPS determined country location.

Indeed, Motomura fails to teach or suggest an access point in a wireless LAN system that communicates with a mobile terminal.

Therefore, Applicant respectfully submits that one of ordinary skill in the art would not have been so motivated to combine the references as alleged by the Examiner.

The Examiner admits that Halasz fails to teach or suggest, “*a maintenance device*,” however, the Examiner alleges that, “[t]he table of country names and operating frequency

bands may be externally rewritable through a communication unit,” of Motomura (paragraph [0024]) is equivalent to Applicant’s *selection circuit that selects a wireless frequency...on the basis of area information inputted into said maintenance device.*

Motomura discloses an electronic apparatus with a short range (Bluetooth) wireless communication device to which a GPS receiver is connected that detects a current country in which the electronic apparatus is presently located and then selects usable frequency bands of the determined country for short range (Bluetooth) wireless communication.

However, Motomura fails to teach or suggest “a communication unit” that teaches or suggests Applicant's claim language of *area information inputted into the maintenance device.* This feature of Applicant's invention is important for providing the maintenance device with the appropriate geographical area information so that the selection circuit may select a wireless frequency. The “communication unit” of Motomura fails to disclose and serve the same function as Applicant's maintenance device to which *area information* is input, such that *a selection circuit selects a wireless frequency on the basis of area information inputted into the maintenance device.*

Additionally, with respect to Applicant's claim 7, Motomura fails to teach or suggest any wireless frequency data stored in the communication unit of paragraph [0024], per Applicant's claim language, “wireless frequency data stored in said maintenance device.”

With respect to Applicant's independent claim 17, neither Halasz nor Motomura, either alone or in combination, teaches or suggests, “*selecting a wireless frequency on the basis of area information inputted at the time of setting a wireless frequency for the wireless LAN system to communicate.*” Halasz discloses automatically selecting an optimum frequency based on a new wireless access point sending “probe request packets” over

incremental frequencies and determining whether a “probe response packet” is received in response from other wireless access points. Halasz fails to teach or suggest any further input required to determine and set a wireless communication frequency. Motomura discloses receiving a GPS signal to determine a geographic position, but fails to teach or suggest setting a wireless frequency for a wireless LAN system to make a mobile terminal and a wireless access point communicate on the set wireless frequency.

Therefore, Motomura fails to overcome the deficiencies of Halasz.

Therefore, Applicant respectfully requests the Examiner to reconsider and withdraw this rejection since the alleged prior art references to Halasz and Motomura (either alone or in combination) fail to teach or suggest each element and feature of Applicant’s claimed invention.

C. The 35 U.S.C. § 103(a) Rejection over Halasz, U.S. Pat. No. 6,732,163 and Motomura, EP 1,209,863 further in view of Hughes et al., U.S. Pat. No. 6,484,029

The Examiner alleges that Halasz, U.S. Pat. No. 6,732,163 and Motomura, EP 1,209,863, (Halasz and Motomura), further in view of Hughes et al., U.S. Pat. No. 6,484,029, (Hughes), makes obvious the invention of claim 5-6, 8-9, 14-15 and 18-20.

The Examiner alleges that one of ordinary skill in the art would have been motivated to modify Halasz and Motomura with the teaching from Hughes to form the invention of claim 5-6, 8-9, 14-15 and 18-20. Applicant submits, however that these references would not have been combined and even if combined, the combination would not teach or suggest each element of the claimed invention.

With respect to Applicant's independent claim 20, Applicant submits, however, that

neither Halasz and Motomura, nor Hughes, nor any alleged combination thereof, teaches or suggests, “*said access point performs reception operations...on the basis of area information inputted through the man-machine interface of the maintenance device at a time of setting a wireless frequency for said access point to communicate with the mobile terminal.*”

Applicant respectfully submits, as above, that Halasz would not have been combined with Motomura as alleged by the Examiner. Indeed, these references are non-analogous because they are completely unrelated. (Halasz is directed to a system for selecting the operating frequency of a wireless access point, in a wireless network.

Motomura is directed to an electronic apparatus with a short range (Bluetooth) wireless communication device to which a GPS receiver is connected that detects a current country in which the electronic apparatus is presently located and then selects usable frequency bands of the determined country for short range (Bluetooth) wireless communication, and problems completely different from those to which the present invention and/or Halasz are directed.) No person of ordinary skill in the art would have considered combining these disparate references, absent impermissible hindsight.

However, Applicant submits that the Examiner fails to provide proper motivation or suggestion in either Halasz or Motomura or of one of ordinary skill in the art to urge the combination as alleged by the Examiner. There is no teaching or suggestion in either Halasz or Motomura to combine Halasz’s disclosure of a wireless access point scanning available frequencies in a wireless network to communicate with a wireless mobile device, with Motomura’s disclosure of an electronic device that changes short range Bluetooth wireless communication frequencies based on a GPS determined country location.

Therefore, Applicant respectfully submits that one of ordinary skill in the art would

not have been so motivated to combine Halasz and Motomura as alleged by the Examiner.

Indeed, Motomura fails to teach or suggest an access point in a wireless LAN system that communicates with a mobile terminal.

The Examiner admits that Halasz fails to teach or suggest, “*a maintenance device*,” however, the Examiner alleges that, “[t]he table of country names and operating frequency bands may be externally rewritable through a communication unit,” of Motomura (paragraph [0024]) is equivalent to Applicant’s *selection circuit that selects a wireless frequency...on the basis of area information inputted into said maintenance device.*

Motomura discloses an electronic apparatus with a short range (Bluetooth) wireless communication device to which a GPS receiver is connected that detects a current country in which the electronic apparatus is presently located and then selects usable frequency bands of the determined country for short range (Bluetooth) wireless communication.

However, Motomura fails to teach or suggest “*a communication unit*” that teaches or suggests Applicant's claim language of *area information inputted into the maintenance device*. This feature of Applicant's invention is important for providing the maintenance device with the appropriate geographical area information so that the selection circuit may select a wireless frequency. The “*communication unit*” of Motomura fails to disclose and serve the same function as Applicant’s maintenance device to which *area information* is input, such that *a selection circuit selects a wireless frequency on the basis of area information inputted into the maintenance device.*

Therefore, Motomura fails to overcome the deficiencies of Halasz.

Therefore, Applicant respectfully requests the Examiner to reconsider and withdraw this rejection since the alleged prior art references to Halasz and Motomura and Hughes

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(either alone or in combination) fail to teach or suggest each element and feature of
Applicant's claimed invention.

III. FORMAL MATTERS AND CONCLUSION

In view of the foregoing, Applicant submits that claims 1-20, all of the claims presently pending in the application, are patentably distinct over the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Attorney's Deposit Account No. 50-0481.

Respectfully Submitted,

Date: April 16, 2007


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